TABLE 37

Domestic R&D paid for by others and performed by the company, by source of funds, industry, and company size: 2017 (Millions of U.S. dollars)

						outside the States							U.S. universities,	Fore		Al	other	
Industry and company size	NAICS code	Total	Companies in the United States		Company's parent	Unaffiliated companies	d go			.S. state vernment gencies	Foreign government agencies		colleges, and academic researchers	colleg an acade researe	d emic	In the United States	the Unit	Outside the United States
All industries	21-23, 31- 33, 42-81	61,065	17,494		15,426	2,978		24,277	i	121	7		70 i	24	i	521	i 147	,
Manufacturing industries	31-33	41,072	6,229		13,315	2,119		18,889	i	27	3		50 i	22	i	293	i 126	,
Food	311	244	6	i	232	4		1		0	0		0	0		1	0)
Beverage and tobacco products	312	107	*		107	*		0		0	0		0	0		0	0	,
Textile, apparel, and leather products	313-16	1	1		0	*	i	*	i	0	0		0	0		0	0	,
Wood products	321	5	*	i	5	*	i	*	i	0	0		0	0		0	0	1
Paper	322	29	28		1	*	i	*	i	*	0		0	0		0	*	i
Printing and related support activities	323	11	2	i	8	1	i	0 - 2	i	*	0		* i	0		0 - 2	i 0-2	! i
Petroleum and coal products	324	15	4		10	0		0		0	0		0	0		0	0	1
Chemicals	325	11,692	2,696		7,115	1,592		205	0	- 26	0 - 4		3	0 - 23		0 - 26	31 - 60	
Basic chemicals	3251	181	6		129 - 169	0 - 39		6		0	0		0	0		*	i 0	1
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	16	2		13	*	i	*	i	0	0		0	0		0	*	+ j
Pesticide, fertilizer, and other agricultural chemicals	3253	284 - 383	0 - 5	i	231 - 383	0 - 39	i	0 - 14		*	0		* i	0		0 - 4	i 0-4	i
Pharmaceuticals and medicines	3254	10,973	2,685		6,465	1,554		186	0	- 25	0 - 4		3	0 - 23		0 - 25	31 - 60	
Soap, cleaning compound, and toilet preparation	3256	118 - 213	1	i	111 - 212	*	i	*	i	*	0		* i	0		*	i 0-4	i
Paint, coating, adhesive, and other chemicals	3255, 3259	23	0 - 5		0 - 24	*	i	0 - 14		0	0		0	0		0 - 4	0	1
Plastics and rubber products	326	117	102		11	*		1		0	0		0	0		3	0	1
Nonmetallic mineral products	327	30 i	15	i	0 - 14	0 - 14	i	2	i 0) - 14	0		* i	0		*	i 0 -	l i
Primary metals	331	8	0 - 4	i	0 - 2 i	*	i	5	i	0	0		0	0 - 2		0 - 4	i 0-2	į i
Fabricated metal products	332	107	37	i	4	*	i	59	i	0	0		0 - 9 i	0		0 - 9	i *	i

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Industry and company size					s outside the d States					U. univer		Foreign universities.	All other	
	NAICS code	Total	Companies in the United States		Unaffiliated companies			U.S. state government agencies	Foreign governmen agencies	colle ar t acad	eges, nd emic	colleges, and academic researchers	In the United States	Outside the United States
Machinery	333	940	130 i	621	19	i 170		1	i 0	*		0	0	* i
Agricultural implement	33311	59	i * i	50 i	6	i 3		0	0	0		0	0	0
Semiconductor machinery	333242	465	4 i	449	5	i 7	i	0	0	0		0	0	0
Engine, turbine, and power transmission equipment	3336	159	0 - 76	9	*	i 75 - 151		0	0	0		0	0	0
Other machinery	other 333	257	49 - 127 i	113	8	7 - 86	i	1	i 0	*		0	0	* i
Computer and electronic products	334	8,633	1,043 - 1,358	2,889	326 - 352	3,937		0 - 27	0 - 4	0 - 48	i	0 - 23 i	7 - 290	39 - 94
Communications equipment	3342	1,715	i 0 - 283 i	628	0 - 30	805	i	0	0 - 4	0		0	0 - 283 i	* i
Semiconductor and other electronic components	3344	2,289	218	1,754	214	80		*	0	*		0 - 23 i	1	0 - 24
Navigational, measuring, electromedical, and control instruments	3345	4,420	826	418	109	2,963		0 - 27	0	0 - 48	i	*	6 - 91	14 - 79
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	150	18	92	6	27		0	0	0		0	7	0
Search, detection, navigation, guidance, aeronautical, and nautical system and instrument	334511	4,083	697 - 809	193 - 327	0 - 104	2,880		0 - 27	0	0 - 48	i	*	0 - 84	14 - 79
Other measuring and controlling device	other 3345	187	0 - 110	0 - 132	0 - 104	56		0	0	0		0	0	0
Other computer and electronic products	other 334	209	0 - 32	89	0 - 30	89		*	0	0		0	1	0
Electrical equipment, appliances, and components	335	181	65	77	*	i 38		0	0	0		0	1 i	0
Transportation equipment	336	18,663	i 1,701 - 2,013 i	2,073	146	14,433	i	0 - 27	0 - 4	i 0 - 48		0	0 - 283 i	0 - 55 i
Automobiles, bodies, trailers, and parts	3361-63	2,745	0 - 804	0 - 2,074	0 - 147	0 - 2,745		0 - 27	0 - 4	0		0	0 - 283	0 - 55
Aerospace products and parts	3364	14,480	i 1,209 i	0 - 2,012	0 - 147	11,259 - 13,070	i	0	0 - 4	i 0 - 48		0	0 - 283 i	0 - 55
Aircraft, aircraft engine, and aircraft parts	336411-13	13,103	i 1,185 - i 1,210 i	0 - 2,012	0 - 147	9,905 - 11,715	i	0	0 - 4	i 0 - 48		0	0 - 283 i	0 - 55 i

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Domestic R&D paid for by others and performed by the company, by source of funds, industry, and company size: 2017 (Millions of U.S. dollars)

Industry and company size					outside the States						U.S. universities,	Foreign universities,	All	other
	NAICS code	Total	Companies in the United States	Company's parent	Unaffiliated companies			U.S. state government agencies		Foreign government agencies	colleges, and academic	colleges, and academic researchers	In the United States	Outside the United States
Guided missile, space vehicle, and related parts	336414-15, 336419	1,377	0 - 23	0	*	1,355		0		0	0 - 23	0	0	0
Military armored vehicle, tank, and tank component	336992	5	0 - 4	0	0	2		0 - 4		0	0	0	0	0
Other transportation	other 336	1,433	0 - 804	0 - 1,434	0 - 147	i 0 - 1,434		0		0	0	0	0	0
Furniture and related products	337	3	2	*	*	i 1	i	0		0	0	0	0	*
Miscellaneous	339	285	63 - 103	138 - 169	9	27 - 42		0 - 27		0	0	0	* i	0
Medical equipment and supplies	3391	240	64	132	8	7 - 38		0 - 27		0	0	0	* i	0
Other miscellaneous manufacturing	3399	44	0 - 38	6 - 37	1	i 0 - 35		*	i	0	0	0	0	0
Nonmanufacturing industries	21-23, 42- 81	19,993	11,265 i	2,111	859	5,388		95		4	19	2	228	21
Mining, extraction, and support activities	21	309	89	6	213	0		0		0	0	0	0	0
Utilities	22	36	i 4	4	0	27	i	*	i	0	0	0	1	*
Wholesale trade	42	31	8 i	22 i	1	i 0		0		0	0	0	* i	0
Electronic shopping and electronic auctions	454111-12	0	0	0	0	0		0		0	0	0	0	0
Transportation and warehousing	48-49	31	30	0	0	0		1		0	0	0	0	0
Information	51	1,354	117	1,047	91	98		0		0	0	0	0	1
Publishing	511	1,062	66	843	90	62		0		0	0	0	0	1
Newspaper, periodical, book, and directory publishers	5111	0	0	0	0	0		0		0	0	0	0	0
Software publishers	5112	1,062	66	843	90	62		0		0	0	0	0	1
Telecommunications	517	40 - 163	0 - 17	21 - 158	0	0 - 3	i	0		0	0	0	0	0
Data processing, hosting, and related services	518	119	36	48	*	35		0		0	0	0	0	0
Other information	other 51	11 - 134	0 - 17	0 - 134	*	i 0-3	i	0		0	0	0	0	*

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					outside the States				U.S. universities,	Foreign universities,	All	other
Industry and company size	NAICS United Company's Unaffiliated company size Total States parent companies		U.S. federal government agencies		Foreign government agencies		colleges, and academic researchers	In the United States	Outside the United States			
Finance and insurance	52	51	* i	0	0	0	0	0	0	0	51	0
Real estate and rental and leasing	53	10	0	10	0	0	0	0	0	0	0	0
Lessors of nonfinancial intangible assets (except copyrighted works)	533	0	0	0	0	0	0	0	0	0	0	0
Other real estate and rental and leasing	other 53	10	0	10	0	0	0	0	0	0	0	0
Professional, scientific, and technical services	54	17,951	10,874 i	1,001	529	5,256	73	4	18	2	174	20 i
Architectural, engineering, and related services	5413	1,147	269	45	12	788	13	*	1	0	20	0
Computer systems design and related services	5415	1,658	339	177	24	995	27	1	0	0	94	0
Scientific research and development services	5417	14,504	10,024 i	685	475 i	3,200	31	3	16	2	50	16 i
Biotechnology research and development	541711	3,653	3,216	104	210	113	5	i 2	1 i	0	1 i	1
Physical, engineering, and life sciences (except biotechnology) research and development	541712	9,978	6,800 i	582	266 i	2,258	13	1	14	2	28	15 i
Social sciences and humanities research and development	541720	873	8	0	0	830	13	0	1	0	22	0
Other professional, scientific, and technical services	other 54	641	242	93	17	272	3	0	1	0	9	3
Health care services	621-23	144	126 i	0	10 i	5	i 0	0	0	0	3 i	0
Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	76	16	22	15	2	20	0	1	0	* i	0
All companies (number of domestic employees)	_	61,065	17,494	15,426	2,978	24,277	i 121	7	70 i	24 i	521 i	147
Small companies												

TABLE 37

Domestic R&D paid for by others and performed by the company, by source of funds, industry, and company size: 2017 (Millions of U.S. dollars)

						s outside the d States	е					U.S. universities,	Forei		All	other
Industry and company size	NAICS code	Total	Companie in the United States		Company's parent	Unaffiliate companie	d gove	federal rnment encies		Fore govern agen	ment	colleges, and academic researchers	colleç and acade	ges, É d emic	In the United States	Outside the United States
10-19 ^a	_	909	0 - 286	i	59	0 - 54		485	25	2		3	*	i	0 - 286	0 - 54
20-49	_	1,842	632		434	97		605	15	1		3	21	i	30	5
Medium companies																
50-99	_	2,071	668		494	105		659	6	1	i	2	1		89	47
100-249	_	3,703	866		1,426	98	1	,241	14	*	i	15	1		28	15 i
Large companies																
250-499	_	2,331	834		668	195		592	20	1		0 - 21	*		0 - 21	3
500-999	_	1,576	311		795	243		221	1	*		2	1		1 i	1 i
1,000-4,999	_	12,771	2,724		7,446	1,085	1	461	30	2		* i	*		18	6
5,000-9,999	_	7,497	4,938	i	909	102	i 1	525	8	0		0 - 17	*		0 - 17	* i
10,000-24,999	_	10,070	2,627	i	2,987	930	3	514	*	0		2	0		9	0
25,000 or more	_	18,295	i 3,603 - 3,899		209	64 - 127	13	976	3	1	i	1 - 46 i	0		21 - 350 i	12 - 74

^{* =} amount < \$500,000; i = > 50% of the estimate is a combination of imputation and reweighting to account for nonresponse.

NAICS = 2012 North American Industry Classification System.

Note(s)

Detail may not add to total because of rounding. Industry classification is based on the dominant business code for domestic R&D performance, where available. For companies that did not report business codes, the classification used for sampling was assigned. Statistics are representative of companies located in the United States that performed or funded R&D. An estimate range may be displayed in place of a single estimate to avoid disclosing operations of individual companies.

Source(s)

National Center for Science and Engineering Statistics and U.S. Census Bureau, Business Research and Development Survey, 2017.

^a Business Research and Development Survey does not include companies with fewer than 10 domestic employees.